

Appln. No. 09/944,009

Amendment dated May 9, 2005

Reply to Office Action mailed April 22, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims (deleted text being struck through and added text being underlined):

- 1 1. (Currently Amended) An adapter for converting a hammer
- 2 tool into a multiple-impact object driving tool, the hammer tool
- 3 having a housing with a barrel portion including a rear section and a
- 4 nose section, a passage extending through the barrel portion with an
- 5 opening in the nose section extending into the passage, the hammer
- 6 tool having a reciprocating impact member being positioned in the
- 7 passage, the adapter comprising:
- 8 a shroud for removably mounting on a hammer tool, the shroud
- 9 having a forward end and a rearward end, a bore being formed
- 10 through the upper shroud between the forward and rearward
- 11 ends, the shroud having a rear portion located at the rearward
- 12 end of the shroud for removably receiving a portion of the
- 13 hammer device, the shroud having a front portion located
- 14 forward of the rear portion;
- 15 a drive punch positioned in the bore of the shroud with a rear
- 16 section for being impacted by the reciprocating impact
- 17 member of the hammer tool and a forward end for impacting
- 18 an object to be driven;
- 19 a guide bushing extending forwardly from the shroud, the guide
- 20 bushing having a forward end and a rearward end, a channel
- 21 extending through the guide bushing between the forward and
- 22 rearward ends for receiving a portion of the object to be
- 23 driven, the guide bushing being slidably mounted on the front
- 24 portion of the shroud such that the guide bushing is movable
- 25 between an extended position and a retracted position;
- 26

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26 wherein the channel of the guide bushing has an entire length
27 extending from a first end of the guide bushing to a second,
28 opposite end of the guide bushing, the channel having a
29 ~~substantially~~ uniform diameter along said entire length of the
30 guide bushing; and
31 wherein the uniform diameter of the channel of the guide bushing
32 along said entire length is slightly larger than a diameter of
33 the forward end of the drive punch;
34 ~~a magnetic member mounted on the guide bushing for facilitating~~
35 ~~hold of an object to be driven in the guide bushing~~
36

2. (Cancelled)

1 3. (Previously Presented) The adapter of claim 1 additionally
2 comprising an annular groove formed in an interior surface of the
3 bore of the shroud, and a securing ring removably mounted in
4 annular groove in the bore for holding the securing ring in a
5 stationary position on the shroud.

1 4. (Original) The adapter of claim 1 additionally comprising
2 a biasing means for biasing the guide bushing into an extended
3 position with respect to the shroud.

5. through 6. (Cancelled)

1 7. (Original) The adapter of claim 1 wherein the shroud has
2 an outer surface, the outer surface of the shroud having a
3 substantially cylindrical front part, a substantially frusta-conical
4 intermediate part, and a substantially cylindrical rear part, a
5 diameter of the rear part of the outer surface being relatively larger
6 than a diameter of the front part of the outer surface.

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1 8. (Previously Presented) An adapter for converting a hammer
2 tool into a multiple-impact object driving tool, the hammer tool
3 having a housing with a barrel portion including a rear section and a
4 nose section, a passage extending through the barrel portion with an
5 opening in the nose section extending into the passage, the hammer
6 tool having a reciprocating impact member being positioned in the
7 passage, the adapter comprising:
8 a shroud for removably mounting on a hammer tool, the shroud
9 having a forward end and a rearward end, a bore being formed
10 through the upper shroud between the forward and rearward
11 ends, the shroud having a rear portion located at the rearward
12 end of the shroud for removably receiving a portion of the
13 hammer device, the shroud having a front portion located
14 forward of the rear portion;
15 a drive punch positioned in the bore of the shroud with a rear
16 section for being impacted by the reciprocating impact
17 member of the hammer tool and a forward end for impacting
18 an object to be driven;
19 a guide bushing extending forwardly from the shroud, the guide
20 bushing having a forward end and a rearward end, a channel
21 extending through the guide bushing between the forward and
22 rearward ends for receiving a portion of the object to be
23 driven, the guide bushing being slidably mounted on the front
24 portion of the shroud such that the guide bushing is movable
25 between an extended position and a retracted position; and
26 a muffling means for muffling noise and vibration mounted on the
27 shroud for mounting on the hammer tool with the shroud and
28 removal from the hammer tool with the shroud;
29 wherein the muffling means comprises a muffler member mounted
30 on the rear portion of the shroud, the muffler member having a

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31 bore in communication with the bore of the shroud, an annular
32 space being formed about the bore of the muffler member for
33 extending about a barrel portion of the hammer tool when the
34 shroud is mounted on the hammer tool, and a muffling material
35 for absorbing vibration being positioned in the annular space
36 for extending about the barrel portion when the shroud is
37 mounted on the hammer tool.

9. through 10. (Cancelled)

1 11. (Currently Amended) An adapter for converting a hammer
2 tool into a multiple-impact object driving tool, the hammer tool
3 having a housing with a barrel portion including a rear section and a
4 nose section, a passage extending through the barrel portion with an
5 opening in the nose section extending into the passage, the hammer
6 tool having a reciprocating impact member being positioned in the
7 passage, the adapter comprising:
8 a shroud for removably mounting on a hammer tool, the shroud
9 having a forward end and a rearward end, a bore being formed
10 through the upper shroud between the forward and rearward
11 ends, the shroud having a rear portion located at the rearward
12 end of the shroud for removably receiving a portion of the
13 hammer device, the shroud having a front portion located
14 forward of the rear portion;
15 a drive punch positioned in the bore of the shroud with a rear
16 section for being impacted by the reciprocating impact
17 member of the hammer tool and a forward end for impacting
18 an object to be driven;
19 a guide bushing extending forwardly from the shroud, the guide
20 bushing having a forward end and a rearward end, a channel
21 extending through the guide bushing between the forward and

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22 rearward ends for receiving a portion of the object to be
23 driven, the guide bushing being slidably mounted on the front
24 portion of the shroud such that the guide bushing is movable
25 between an extended position and a retracted position;
26 wherein the channel of the guide bushing has an entire length
27 extending from a first end of the guide bushing to a second,
28 opposite end of the guide bushing, the channel having a
29 substantially uniform diameter along said entire length of the
30 guide bushing;
31 wherein the rear portion of the shroud includes retaining means for
32 retaining the shroud on the nose of the hammer tool; wherein
33 the retaining means includes:
34 a longitudinal slit formed in the rear portion of the shroud toward
35 the forward end; and
36 a pair of retaining tabs, each of the retaining tabs are located on
37 opposite sides of the longitudinal slit; and a fastener for
38 constricting the longitudinal slit by pulling the retaining tabs
39 toward each other.

1 12. (Original) The adapter of claim 11 wherein the retaining
2 means includes:
3 a longitudinal slit formed in the rear portion of the shroud and
4 extending from the rearward end of the shroud toward the forward
5 end; and
6 a pair of retaining tabs, each of the retaining tabs being
7 mounted on the rear portion on a side of the longitudinal slit such
8 that the retaining tabs are located on opposite sides of the
9 longitudinal slit; and
10 a fastener for constricting the longitudinal slit by pulling the
11 retaining tabs toward each other.

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1 13. (Original) The adapter of claim 11 wherein the retaining
2 means includes:
3 a recess formed in the rear portion of the shroud, the recess
4 extending between the bore of the shroud and an exterior of the
5 shroud;
6 a locking ball positioned in the recess and being movable in
7 the recess between a locked position in which the locking ball
8 extends into the bore for engaging an exterior of a nose section of
9 the hammer tool, and an unlocked position in which the locking ball
10 is substantially completely retracted into the recess;
11 a lever movably positioned in the recess, the lever having a
12 locked position in which the lever presses the locking ball into the
13 locked position and an unlocked position in which the lever permits
14 the locking ball to retract into the recess.

1 14. (Previously Presented) The adapter of claim 1 wherein an
2 interior surface of the bore at the rear portion has interior threads
3 formed thereon for threadedly engaging a helical groove on an
4 exterior of a nose of the barrel portion of the hammer tool provided
5 for accepting a retainer spring, and wherein peaks of the interior
6 threads are semicircular in cross-section for engaging the helical
7 groove on the hammer tool.

1 15. (Previously Presented) An adapter for converting a
2 hammer tool into a multiple-impact object driving tool, the hammer
3 tool having a housing with a barrel portion including a rear section
4 and a nose section, a passage extending through the barrel portion
5 with an opening in the nose section extending into the passage, the
6 hammer tool having a reciprocating impact member being positioned
7 in the passage, the adapter comprising:
8 a shroud for removably mounting on a hammer tool, the shroud

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9 having a forward end and a rearward end, a bore being formed
10 through the upper shroud between the forward and rearward
11 ends, the shroud having a rear portion located at the rearward
12 end of the shroud for removably receiving a portion of the
13 hammer device, the shroud having a front portion located
14 forward of the rear portion;
15 a drive punch positioned in the bore of the shroud with a rear
16 section for being impacted by the reciprocating impact
17 member of the hammer tool and a forward end for impacting
18 an object to be driven;
19 a guide bushing extending forwardly from the shroud, the guide
20 bushing having a forward end and a rearward end, a channel
21 extending through the guide bushing between the forward and
22 rearward ends for receiving a portion of the object to be
23 driven, the guide bushing being slidably mounted on the front
24 portion of the shroud such that the guide bushing is movable
25 between an extended position and a retracted position; and
26 an extender assembly removably mounted on the shroud, the
27 extender assembly including a collar extending about the
28 shroud and an extender member pivotally mounted on the
29 collar and extending forwardly past the forward end of the
30 shroud and the forward end of the guide bushing, a foremost
31 end of the extender member having a forked configuration for
32 receiving a portion of a fastener to position the fastener as it
33 extends into the channel of the guide bushing.

1 16. (Original) The adapter of claim 15 wherein the extender
2 member comprises has two telescopic portions permitting adjustment
3 of the amount of forward extension of the foremost end of the
4 extender member.

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17. through 20. (Cancelled)

1 21. (Previously Presented) The adapter of claim 1 wherein
2 the shroud and the slidable guide bushing have an overall length, a
3 length of the slidable guide bushing comprising approximately one-
4 third of the overall length of the shroud and guide bushing.

1 22. (Previously Presented) The adapter of claim 1 wherein
2 the forward end of the drive punch terminates at a forwardmost end
3 of the front portion of the shroud.

1 23. (Previously Presented) The adapter of claim 1 wherein
2 the forward end of the drive punch extends into the channel of the
3 guide bushing when the slidable guide bushing is fully extended
4 from the shroud.

1 24. (Previously Presented) The adapter of claim 15 wherein
2 the forked configuration of the foremost end of the extender member
3 includes a pair of converging edges in a concave configuration.

25. (Cancelled)

1 26. (Previously Presented) The adapter of claim 1 wherein the
2 substantially uniform diameter of the channel of the guide bushing
3 extends along an entirety of the length of the channel of the guide
4 bushing.

1 27. (New) The adapter of claim 1 additionally comprising a
2 magnetic member mounted on the guide bushing for facilitating hold of an
3 object to be driven in the guide bushing.